CLAIMS

1. A device for corrected acquisition of the shadow of an ophthalmic lens (103) possessing one or more marks (PC), the device comprising:

· receiver means (121, 114) for receiving said ophthalmic lens;

· on either side of said receiver means, firstly lighting means (S) for illuminating the ophthalmic lens (103) installed on said receiver means, and secondly acquisition means (122, 125, C) for acquiring the shadow of said ophthalmic lens illuminated by the lighting means (S);

· measurement means (S, 124, C) suitable for measuring the optical deflection power exerted by the ophthalmic lens on at least one light ray and for delivering a signal representative of said deflection power; and

· an electronic and computer system including geometrical correction calculation instructions for deducing from said measured deflection power a corrected shape for at least a portion of the shadow of the ophthalmic lens as perceived by the acquisition means (122, 125, C).

2. A device according to the preceding claim, in which said corrected shape corresponds substantially to the shape that the shadow of said lens would present if said lens did not possess any deflection power.

3. A device according to any preceding claim, in which the measurement means (S, 124, C) are suitable for measuring the deflection power exerted by the ophthalmic lens on at least three light rays passing through the lens at three points that are not in alignment.

4. A device according to any preceding claim, in which the measurement means are of the type proceeding by deflectometry.

5. A device according to the preceding claim, in which the deflectometry measurement means include at least one beam separator located between the lens receiver means (121, 114) and the acquisition means (122, 125, C).

6. A device according to the preceding claim, in which the deflectometry measurement means include said acquisition means (122, 125, C).

7. A device according to any preceding claim, in which the acquisition means include a projection screen (122) and an image acquisition system (C, 125) arranged to sense the image on said projection screen.

8. A device according to any preceding claim, in which said receiver means, said lighting means, said acquisition means, and said measurement means are held stationary relative to one another.

9. A device according to any preceding claim, having a single light path between said lighting means and said acquisition means.

10. A device according to any one of claims 4 to 8, in which said beam separator is a support (124) for at least one sign (124A, 124B) located between said receiver means and said acquisition means, and in which the geometrical correction relationship calculated by said electronic and computer system is a function of the deformed shadow of the sign (124A, 124B) perceived by the acquisition means (122, 125, C).

11. A device according to the preceding claim, in which the sign support (124) is activatable and deactivatable.

12. A device according to the preceding claim, in which said sign support is a transparent active screen suitable for selectively displaying said opaque sign.

13. A device according to the preceding claim, in which said transparent screen is a liquid crystal screen.

14. A device according to claim 9, in which said sign support has a regular array of repeated patterns.

15. A device according to the preceding claim, in which said sign support comprises a Hartmann matrix.

16. A device according to any one of claims 9 to 14, in which said sign support includes a geometrical figure having a maximum outside dimension lying in the range 2 mm to 10 mm.

17. A device according to the preceding claim, in which the geometrical covers an area lying in the range 3 mm^2 to 80 mm^2.

18. A device according to either one of the two preceding claims, in which the geometrical figure is of a shape different from a point or a cross, being suitable for being distinguished visually from a marking made on an ophthalmic lens.

19. A device according to any one of claims 14 to 17, in which the geometrical figure is a polygon, preferably a triangle.

20. A device according to any one of claims 14 to 17, in which the geometrical figure is a circle or an oval.

21. A device according to any one of claims 1 to 3, in which the measurement means are of the type operating by interferometry.

22. A device according to any preceding claim, including means for placing a handling peg at a location that is determined by calculation on the front face of said ophthalmic lens.

23. A device according to the preceding claim, in which said means for placing the handling peg are automatic means.

24. A device according to claim 21, in which said means for placing the handling peg are manually controlled manipulator means.

25. A device according to any preceding claim, including display means controlled by the electronic and computer system to display the at least partially corrected shape of the shadow perceived by the acquisition means (122, 125, C).

26. A device according to the preceding claim, in which the electronic and computer system controls the display means for displaying the outline of the lens without applying the geometrical correction calculation thereof.

27. A device according to any preceding claim, in which the electronic and computer system includes image recognition instructions suitable for recognizing the shadow of a mark of the ophthalmic lens as perceived by the acquisition means (122, 125, C) and for applying said geometrical correction calculation thereto so as to deduce therefrom its corrected position in a known frame of reference corresponding substantially to the position that the shadow

of said mark would present in said frame of reference in the absence of the lens possessing any deflection power.

28. A device according to the preceding claim, in which the image recognition instructions are suitable for recognizing the shadow of a center and/or axis mark of the ophthalmic lens as perceived by the acquisition means (122, 125, C).

29. A device according to either one of the two preceding claims, in which the image recognition instructions are suitable for recognizing the shadow of a reference mark for far vision or for near vision on the ophthalmic lens as perceived by the acquisition means (122, 125, C).

30. A method of correcting acquisition of the shadow of an ophthalmic lens (103) presenting one or more marks (PC), the method comprising the following steps:

- illuminating the lens by a light beam;
- measuring the optical deflection power exerted by the ophthalmic lens on at least one incident light ray of said beam; and
- from the measured deflection power, deducing by calculation a corrected shape for at least a portion of the shadow of said ophthalmic lens as illuminated by said light beam.

31. A method according to the preceding claim, in which said corrected shape corresponds substantially to the shape that the shadow of said lens would present if said lens did not possess any deflection power.

32. A method according to either one of the two preceding claims, in which a measurement is made of the deflection power exerted by the ophthalmic lens on at least three distinct light rays passing through the lens at three points that are not in alignment.

33. A method according to any one of the three preceding claims, in which, in order to measure the deflection power of the ophthalmic lens, use is made of deflectometer means.

34. A method according to the preceding claim, in which, in order to measure the deflection power of the ophthalmic lens, the ophthalmic lens is illuminated and the shadow of the lens is sensed on acquisition means (122, 125, C), a beam separator being disposed between said acquisition means and the lens.

35. A method according to any one of claims 30 to 32, in which, in order to measure the deflection power of the ophthalmic lens, use is made of interferometer means.

36. A method according to any one of claims 30 to 35, in which, for an ophthalmic lens of the multifocal type, the geometrical correction is applied to at least one reference mark for near vision or for far vision of the multifocal ophthalmic lens in order to obtain a corrected position for said mark.

37. A method according to any one of claims 30 to 36, in which the geometrical correction is applied to the shadow of at least one center and/or axis mark of the ophthalmic lens in order to obtain a corrected position for said shadow.

38. A method according to the preceding claim, in which, a virtual image (200) representative of the outline desired after the lens has been cut to shape is displayed on a display screen (105), and the position of said outline image is identified relative to the corrected position for the shadow of the centering mark on the lens.

39. A method according to any one of claims 30 to 38, including a step of displaying the corrected shape of the shadow on the lens on a display screen (105).

40. A method according to the preceding claim, in which, during said display step, the shadow of the outline of the lens is displayed on a display screen (105) without applying the geometrical correction calculation thereto.

41. A method according to any one of claims 30 to 40, including a step of recognizing the shadow of a mark on the ophthalmic lens and a step of applying the geometrical correction calculation to said mark shadow so as to deduce therefrom its corrected position in a known frame of reference, said corrected position corresponding substantially to the position that the shadow of said mark would present in said frame of reference in the absence of the lens having any deflection power.

42. A method according to the preceding claim, applied to automatically centering the lens, in which the recognized shadow is that of a center and/or axis mark of the ophthalmic lens.